



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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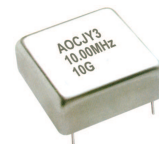


# OVEN CONTROLLED CRYSTAL OSCILLATOR

AOCJY3 Series



RoHS  
Compliant



25.4x 25.4 x 13.0 mm

## FEATURES:

- 25.4x 25.4 x 13.0 mm Leaded- RoHS Compliant Reflow-able Package
- SC-Cut, High “Q” resonator based design
- Either Sinewave or CMOS RF output
- Available with  $\pm 30$  ppb over  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$  operating temperature Range
- Tighter Stabilities to  $\pm 5.0$  ppb over  $0^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  also available
- Exceptional long-term Aging of  $\pm 500$  ppb max. over 10-Year Product Life
- Excellent close-in phase noise ( $-140$  dBc/Hz Typical @100 Hz offset; 10MHz carrier)

## APPLICATIONS:

- Cellular Infrastructure
- Radar Systems
- Test & Measurement Equipment
- GPS Tracking with precision hold-over accuracy
- WiMax / WLAN

## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
RF Output					
Frequency	10.00		100.00	MHz	Overall Frequency Range <i>(Note #1)</i>
Standard Available Frequencies	10.00, 12.80, 13.00, 26.00, 38.88, 40.00, 100.00 MHz				
Waveform	CMOS				
Level "1" (Logic High)	0.9*Vdd			Volts	<i>(Note #2)</i>
Level "0" (Logic Low)			0.1*Vdd	Volts	<i>(Note #2)</i>
Load		15		pf	
Rise & Fall Time			6.0	ns	
Duty Cycle	45		55	%	
Waveform	Sinewave				
Peak Power	2.00			dBm	
Output Load		50		$\Omega$	
Short Term Stability		$1 \times 10^{-10}$		/second	Alan Variance
Operable Temperature Range	-40		75	$^{\circ}\text{C}$	<a href="#">See Stability Options</a>
Frequency Stability Options					
0 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$ <i>(Note #3)</i>			$\pm 5.00$	ppb	Default Spec.
-20 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$			$\pm 10.00$	ppb	Option “E”
-40 $^{\circ}\text{C}$ to +75 $^{\circ}\text{C}$			$\pm 30.00$	ppb	Option “F”
Frequency Stability vs. Supply Voltage (Vdd $\pm 5\%$ )			$\pm 2.00$	ppb	
Frequency Stability vs. Load Variation ( $\pm 10\%$ )			$\pm 2.00$	ppb	
Warm-Up @ 25 $^{\circ}\text{C}$			$\pm 30.00$	ppb	In $\leq 3$ -minutes
Power Consumption @ turn on			3.60	Watts	
Power Consumption Steady State			1.20	Watts	
Supply Voltage (Vdd)	3.13	3.30	3.46	Volts	<a href="#">See Options</a>

**Note #1:** Carrier frequency 100.000MHz is not offered @ Vdd=12.0V

**Note #2:** When Vdd=12.0V; Level “1” = 4.50 V minimum; Level “0” = 0.50V maximum

**Note #3:**  $\pm 5.00$  ppb stability is only available for  $F_0 \leq 40\text{MHz}$ . For frequencies above 40MHz, the best available frequency stability is  $\pm 10.00$  ppb over  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

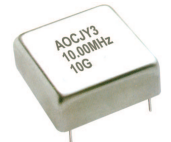


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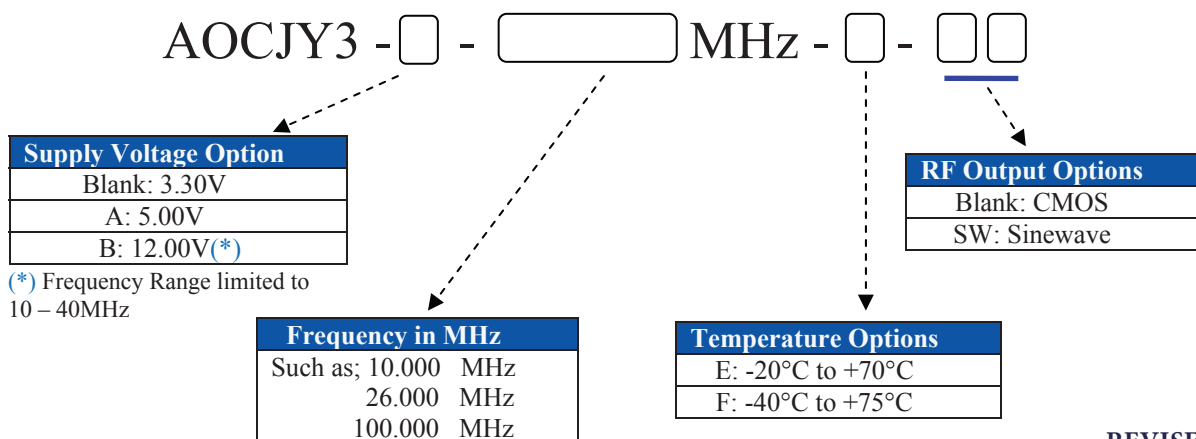
25.4x 25.4 x 13.0 mm

## STANDARD SPECIFICATIONS - continued.

Parameters	Minimum	Typical	Maximum	Units	Notes
<b>Aging</b>					
Daily			±1.0	ppb	
First Year			±100	ppb	
10-Years			±500	ppb	
<b>Spectral Content</b>					
Spurious Response			-35	dBc	
Phase Noise (10MHz Carrier) @ 5V					
@ 1 Hz offset			-90	dBc	
@ 10 Hz offset			-120	dBc	
@ 100 Hz offset			-140	dBc	
@ 1,000 Hz offset			-145	dBc	
@ 10,000 Hz offset			-155	dBc	
<b>Electrical Frequency Adjustment</b>					
Control Voltage Range (Vc)	0.0		Vdd	Volts	
Frequency Pull Range	±0.700			ppm	
Frequency Pull Slope		Positive			
Control Voltage Port Impedance	10			kΩ	
Center Control Voltage (Note #4)	(Vdd/2) -0.5	Vdd/2	(Vdd/2) +0.5	Volts	Center Control Voltage
Control Port Linearity		±10		%	
Reference Voltage (Vdd=3.3V)	2.70	2.80	2.90	Volts	Output @ Pin#4
Reference Voltage (Vdd=5.0V)	4.40	4.50	4.60	Volts	Output @ Pin#4
Reference Voltage (Vdd=12.0V)	4.90	5.00	5.10	Volts	Output @ Pin#4
Storage Temperature	-40		+100	°C	

**Note #4:** When Vdd=12.0V, Control Voltage Range is 0.0V to 5.0V and therefore, the Center Control Voltage is (2.50V±0.50V)

## OPTIONS AND PART IDENTIFICATION (Left blank if standard)



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REVISED: 07/05/2018

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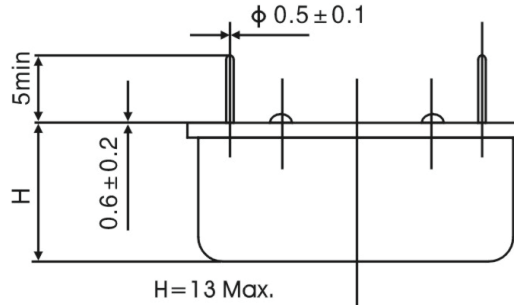
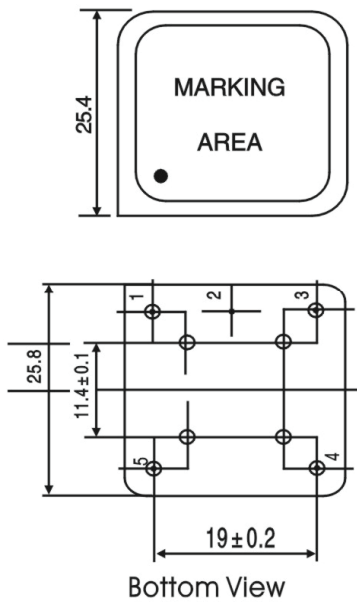


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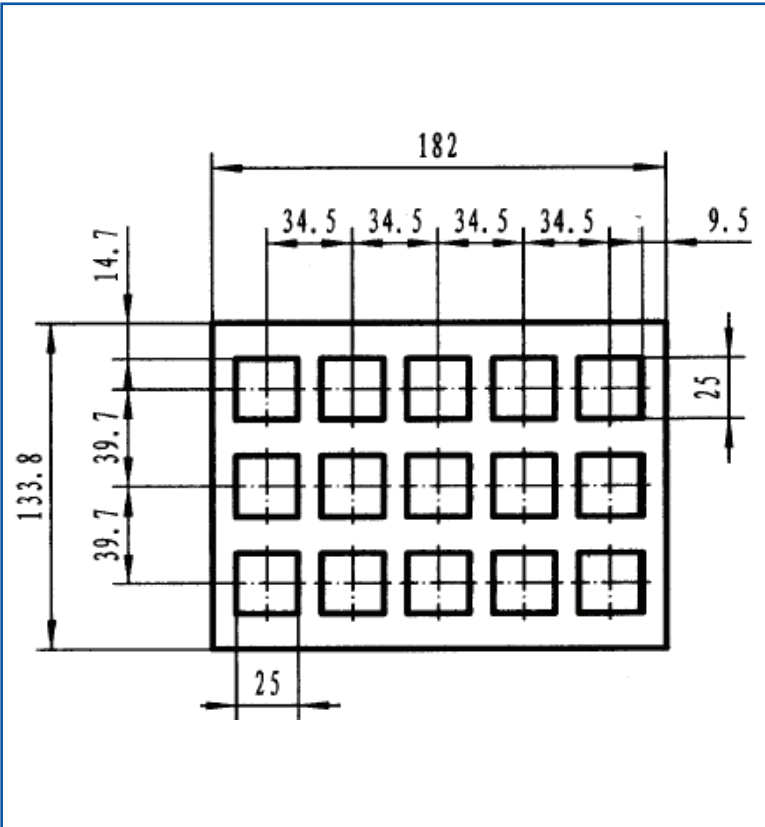
## OUTLINE DIMENSIONS



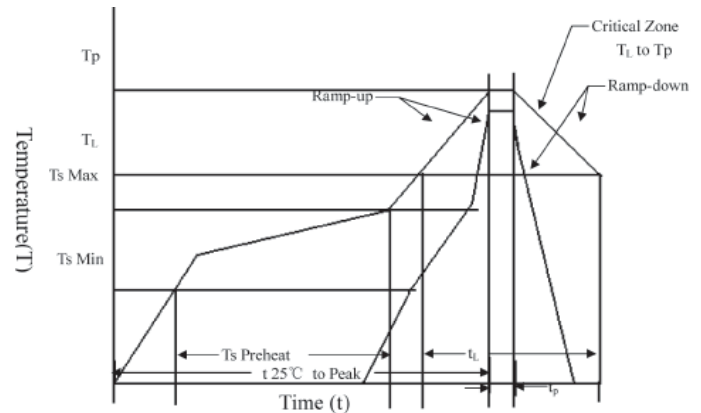
PIN	FUNCTION:
1	R F Output
2	GND
3	Control Voltage
4	Reference Voltage
5	Power Supply

Unit:mm

## PACKAGING: 15 pcs/tray



## REFLOW PROFILE:



T <sub>S</sub> max to T <sub>L</sub> (Ramp-up Rate)	3°C/second max.
Preheat	
Temperature Min. (T <sub>S</sub> Min.)	150°C
Temperature Typical (T <sub>S</sub> Typ.)	175°C
Temperature Max. (T <sub>S</sub> Max.)	200°C
Time (t <sub>s</sub> )	60 ~ 180 seconds
Ramp-up rate (T <sub>L</sub> to T <sub>p</sub> )	3°C/second max.
Time Maintained Above:	
--Temperature (T <sub>L</sub> )/Time (T <sub>L</sub> )	217°C/60 ~ 150 seconds
Peak Temperature (T <sub>p</sub> )	250°C max. for 10 seconds
Target Peak Temperature (T <sub>p</sub> Target)	250°C +0/-5°C
Time within 5°C of actual peak (t <sub>p</sub> )	20 ~ 40 seconds
Ramp-down Rate	6°C/second max.
Tune 25°C to Peak Temperature (t)	8 minutes max.

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